

# Electromagnetic Fields:

**THE GOOD, THE BAD AND THE UGLY!**

'Ric Coggins, CPG, CAPS, NCT



# Why Me?

...not a scientist

...not an engineer

...not a professor



June 2017

I have taken responsibility for my own health!



My goal is not to persuade you about EMFs...

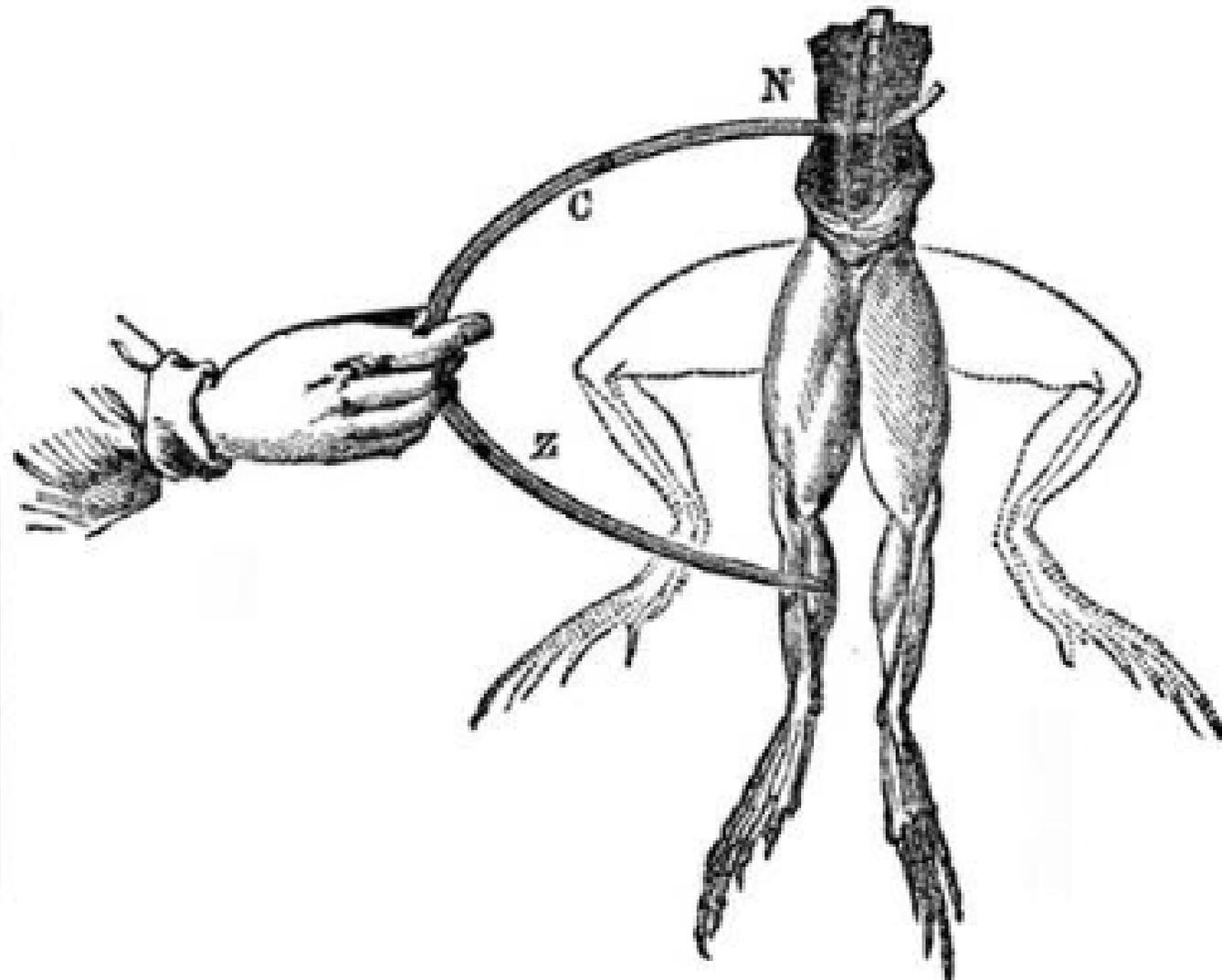
My goal is to persuade you to take  
responsibility for your health!



Why would EMFs Matter?

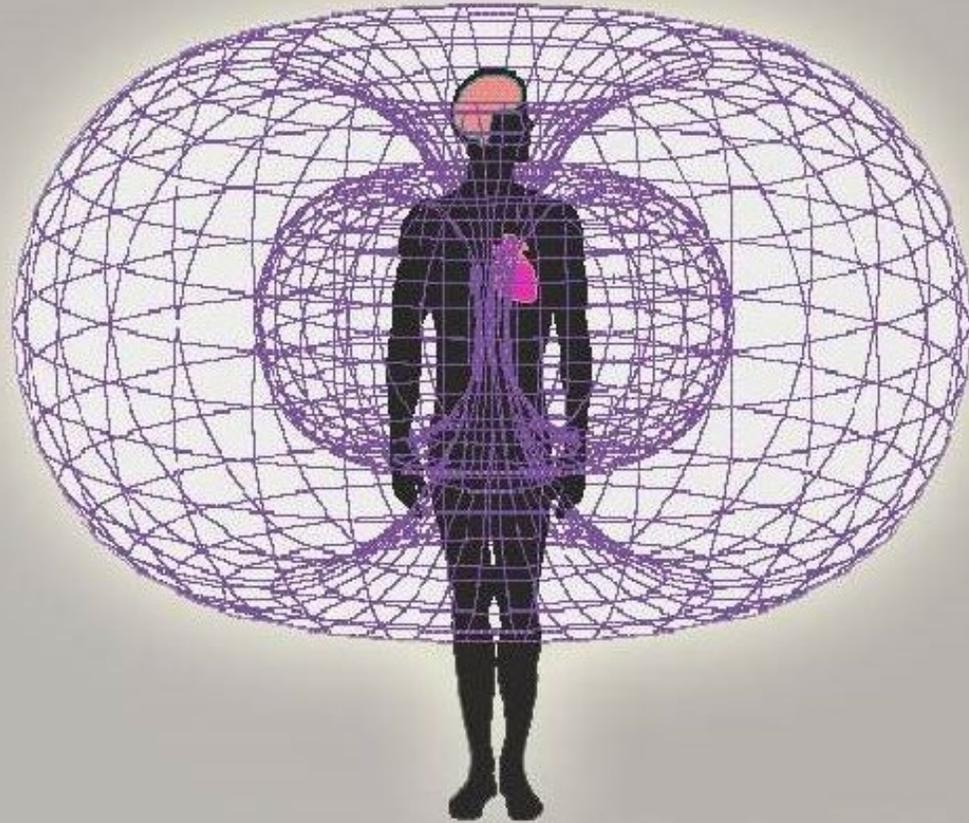
We are “Biomagnetic” Beings.

...not new news!



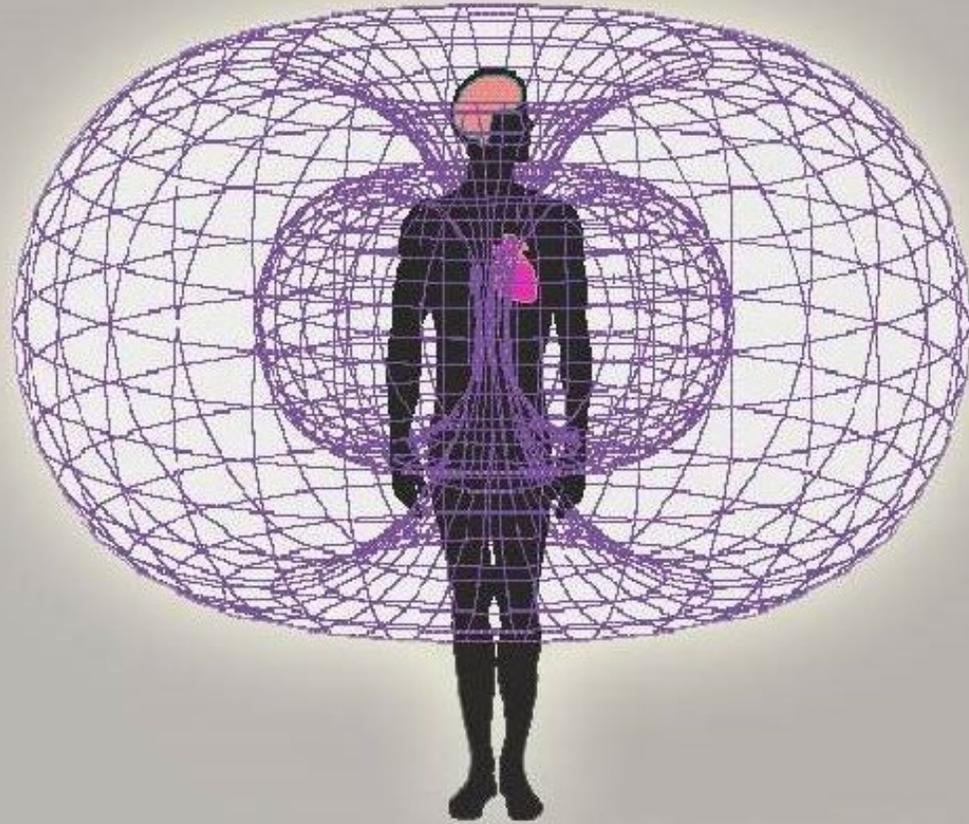
# Galvani in the 18<sup>th</sup> Century

## The electromagnetic field of the heart



*...first demonstrated in 1863 by Gerhard Baule and Richard McFee*

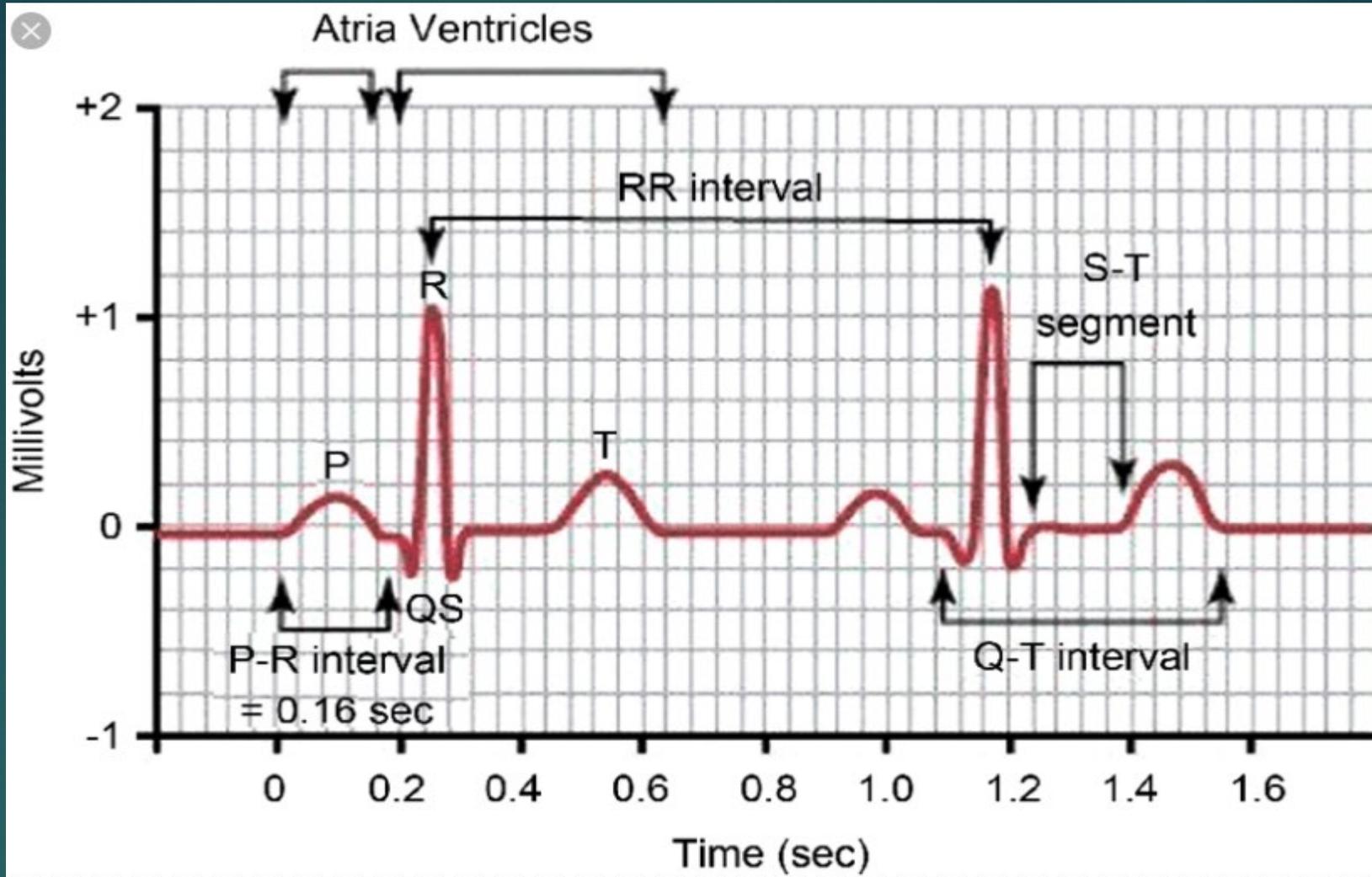
## The electromagnetic field of the heart



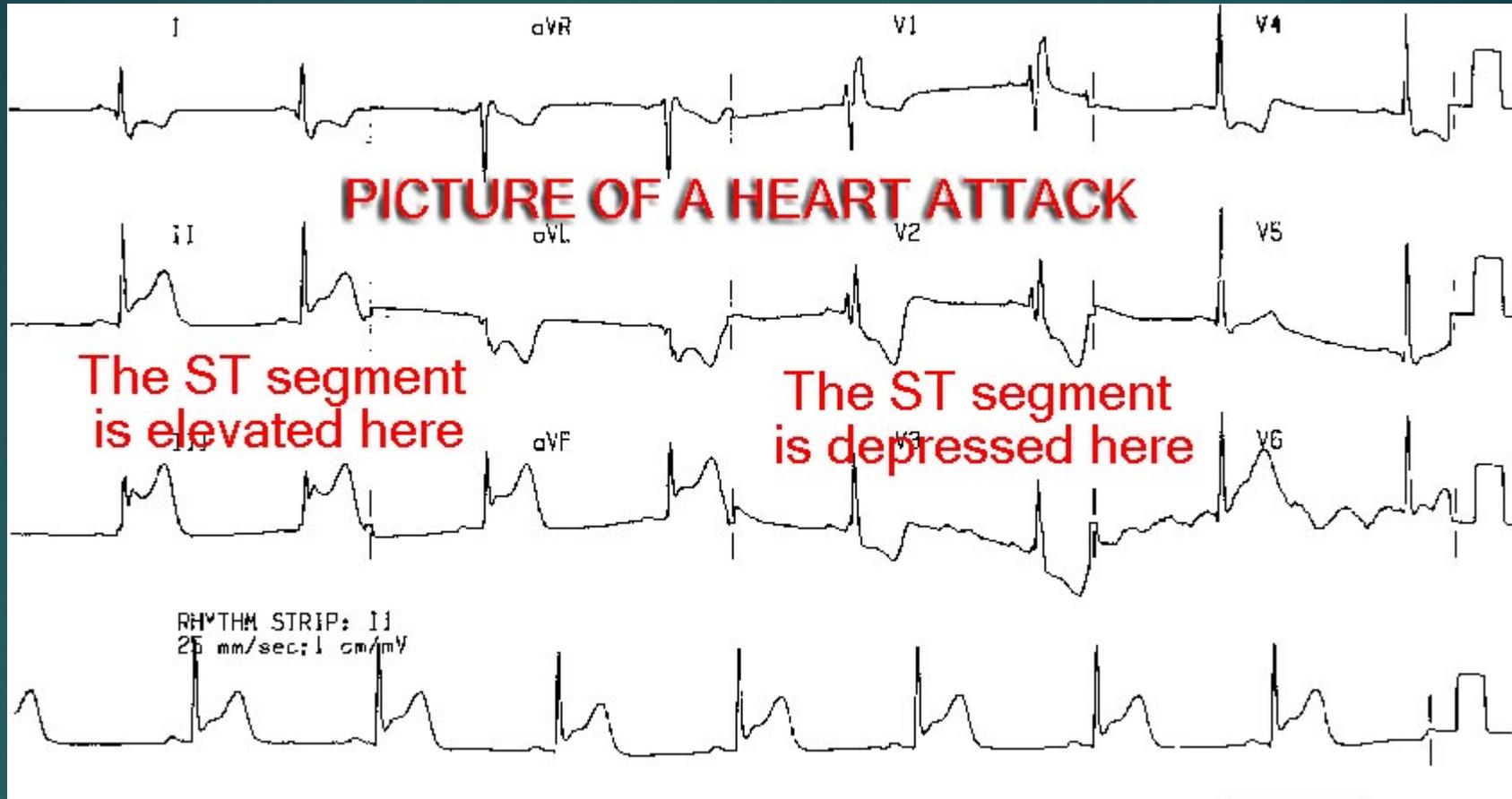
and can be detected up to 3 feet away from the body, in all directions



Is that “Woo Woo”?



Normal EKG



Myocardial Infarction EKG





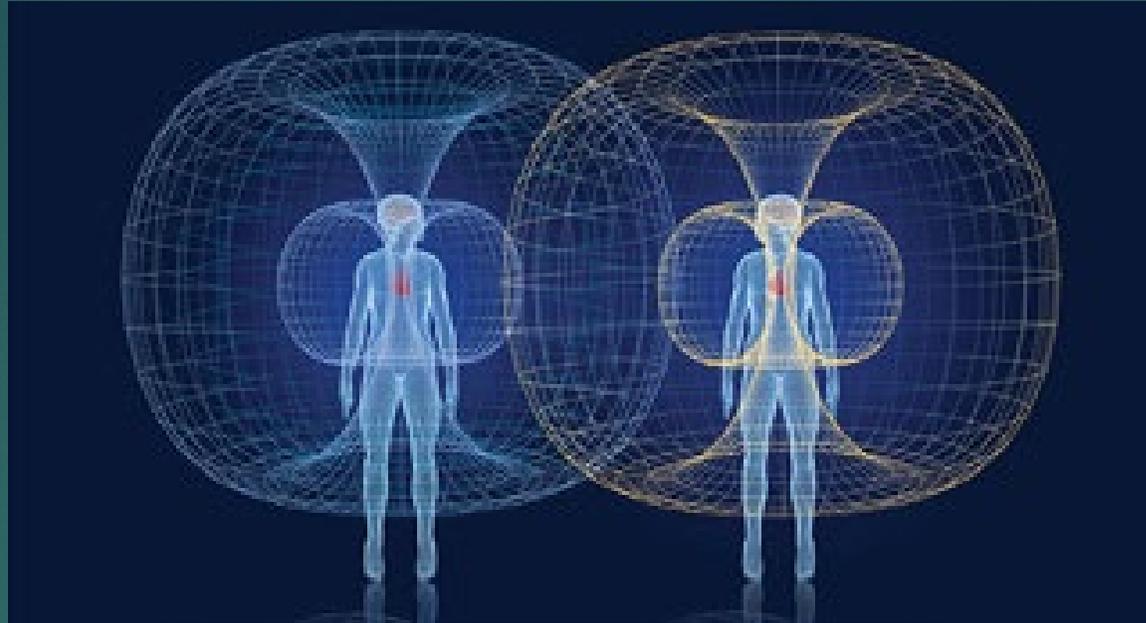
The brain also emits a magnetic field...



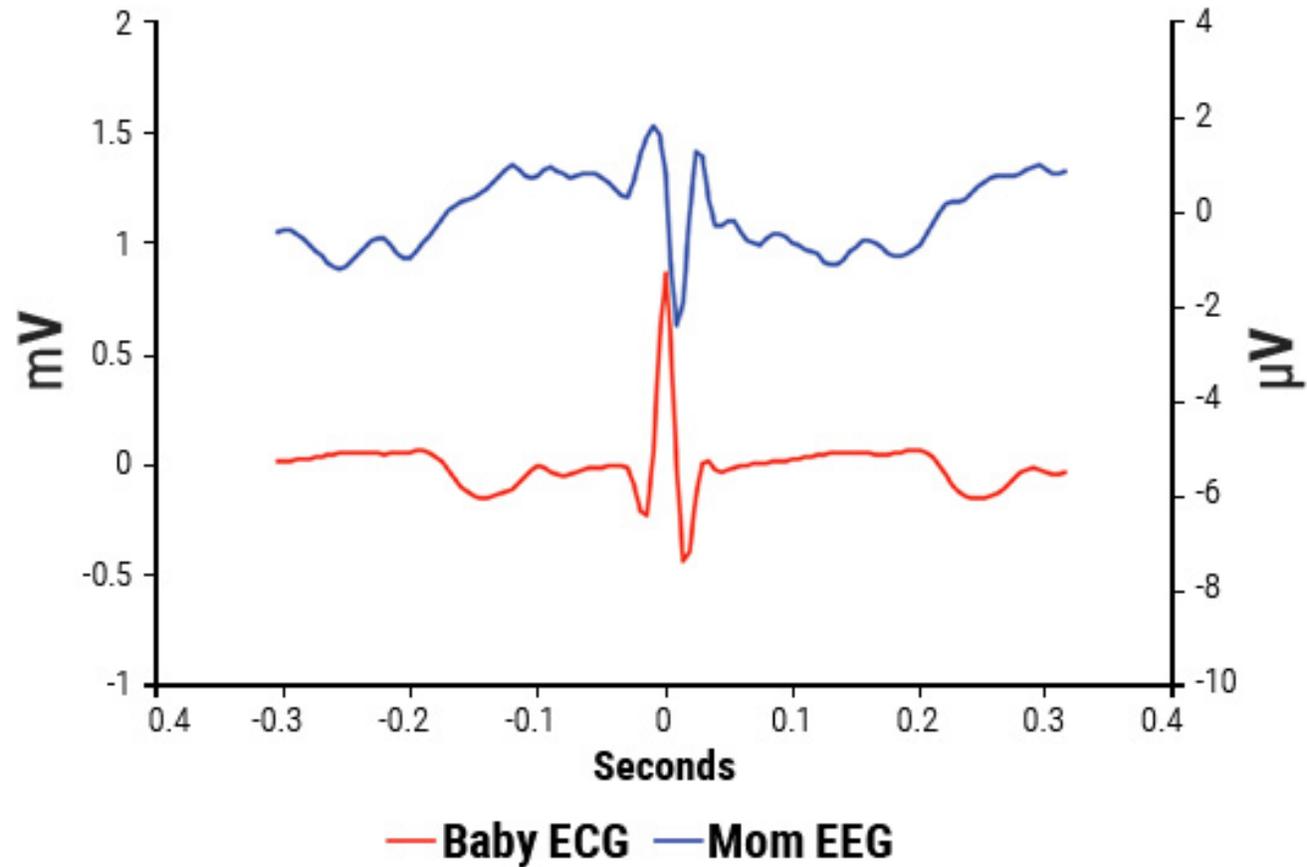
...measured as Brain waves



Ingenious new wearable tracks users' brain waves to forecast epileptic seizures



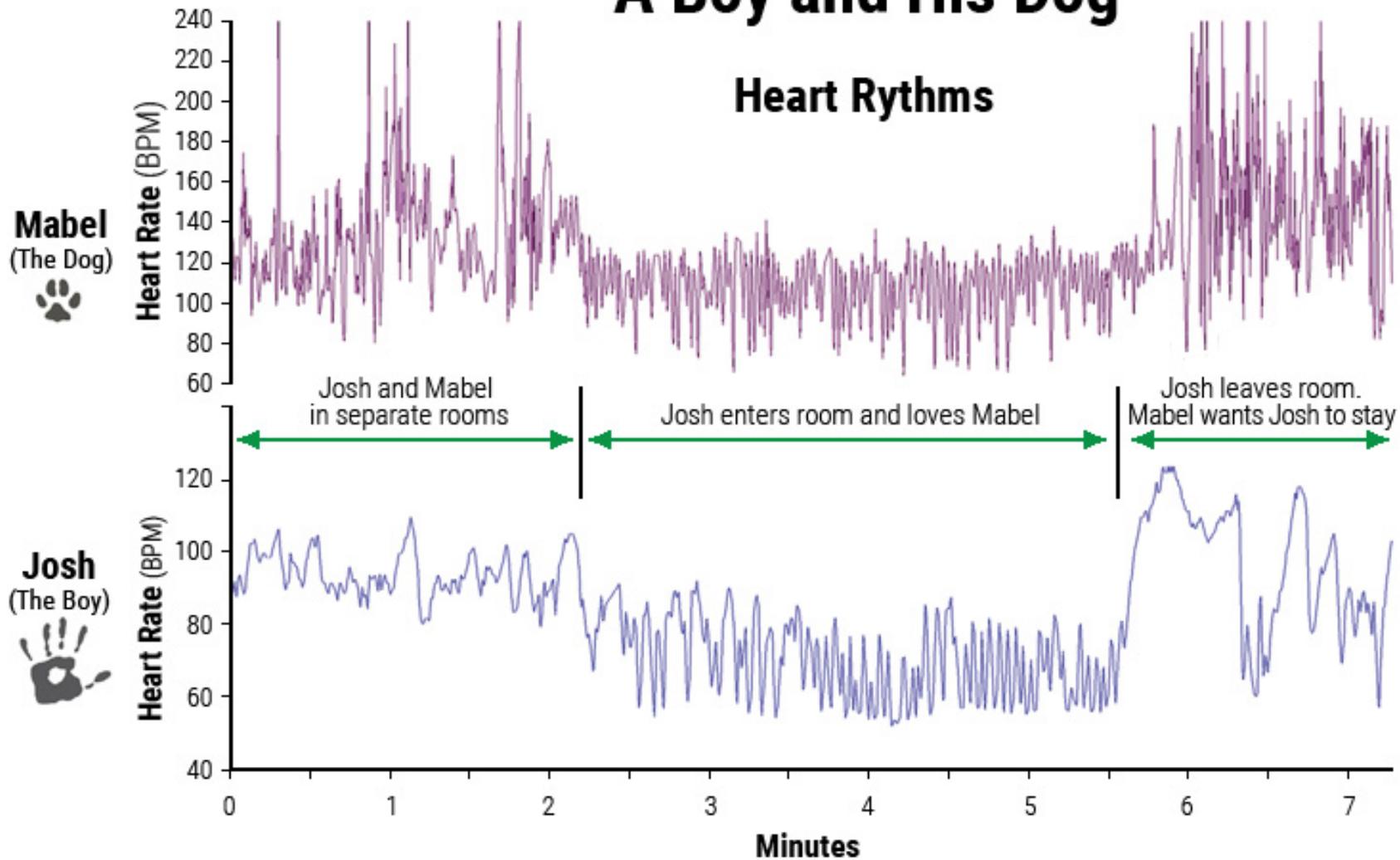
Studies show that these human magnetic fields interact with each other

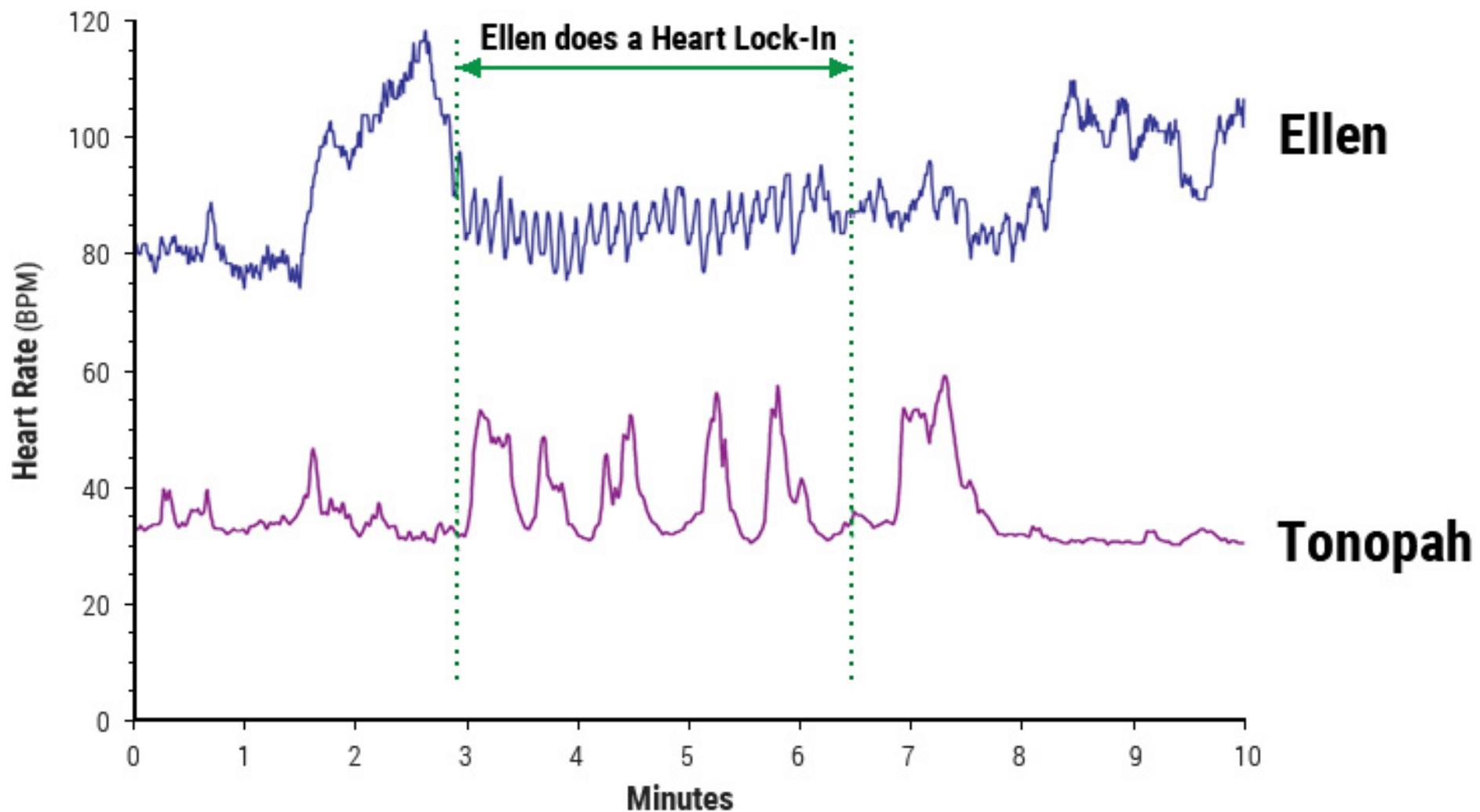


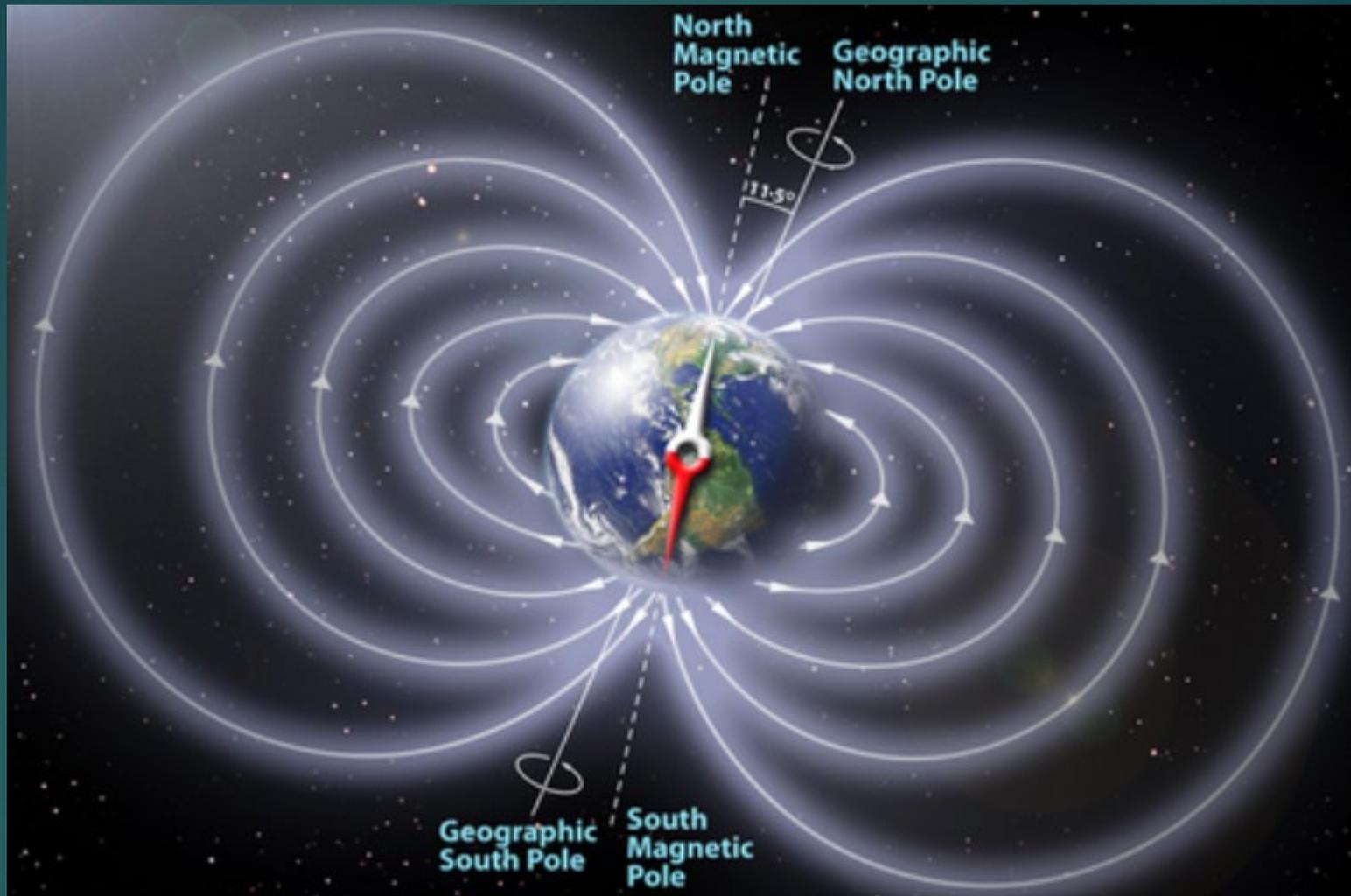
This study shows the synchronization of EMFs between a mother's Brain and her baby's heart

# A Boy and His Dog

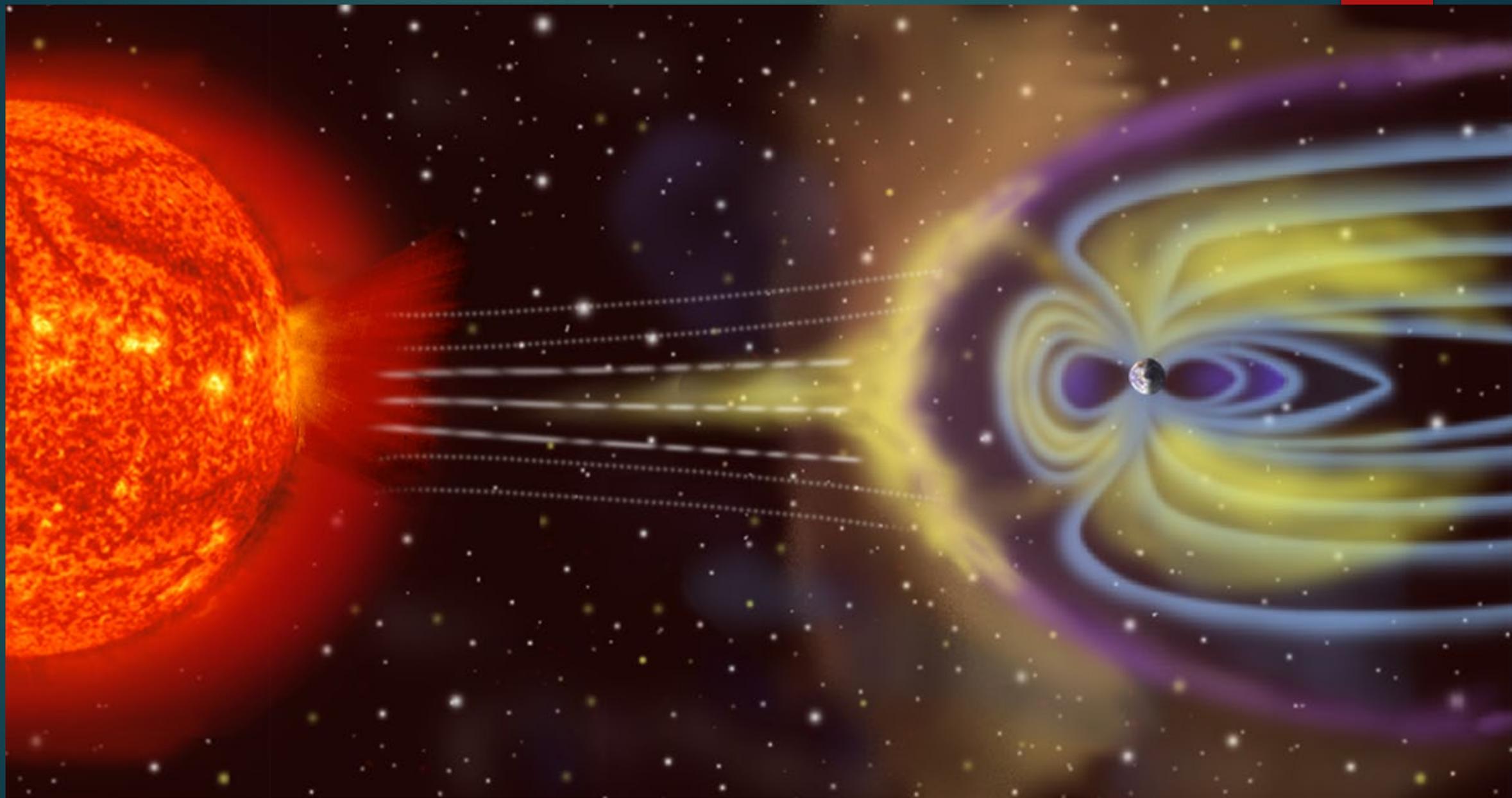
## Heart Rhythms







Our Earth is known to generate several magnetic fields  
One, the “Geomagnetic” field emanates from the core of the Earth



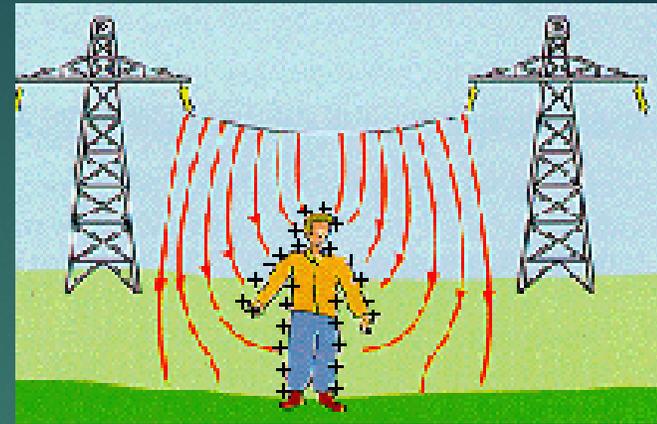
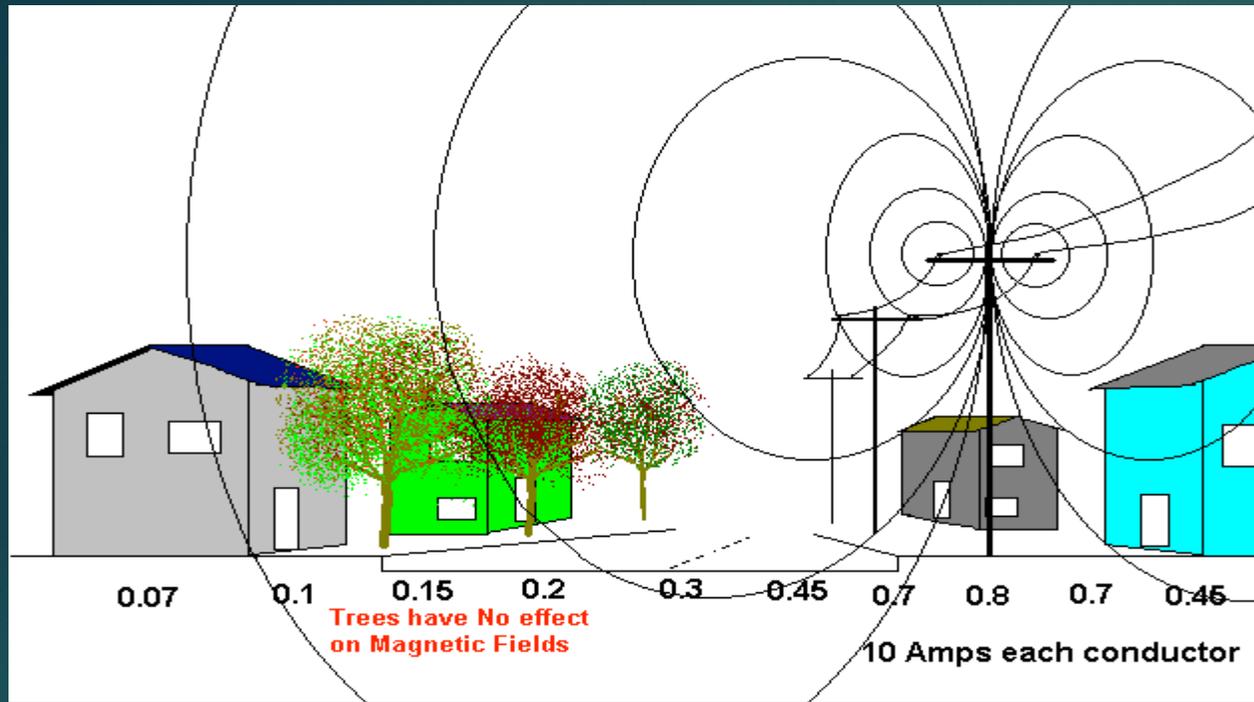


“With these things known, it is not hard to conceive that disruptions and disturbances of these electromagnetic fields (both our own and the Earths) *could* be a root cause for a number of health maladies.

Science has shown a number of negative effects from disruptive EMFs including cell membrane damage, loss of calcium ions and even DNA damage.”

Courtesy Green Living Magazine

“Cancer was first associated with exposure to electromagnetic fields (EMF) in 1979 when Wertheimer and Leeper reported that children dying from cancer resided more often in homes believed to be exposed to higher EMF than did healthy control children.”



- ▶ “**Low-frequency electric fields** influence the human body just as they influence any other material made up of charged particles. When electric fields act on conductive materials, they influence the distribution of electric charges at their surface. **They cause current to flow through the body to the ground.**”

International Agency  
Research on Cancer

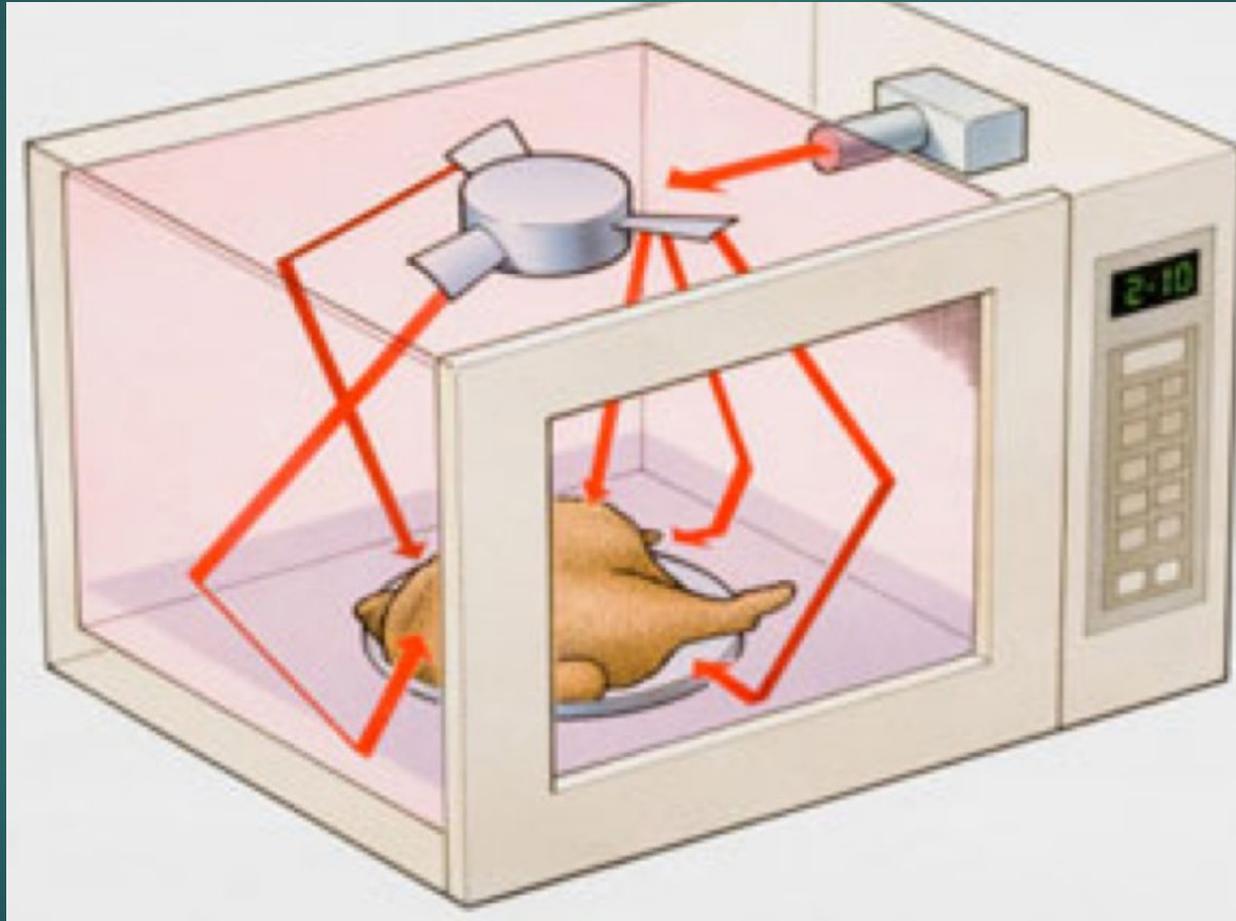


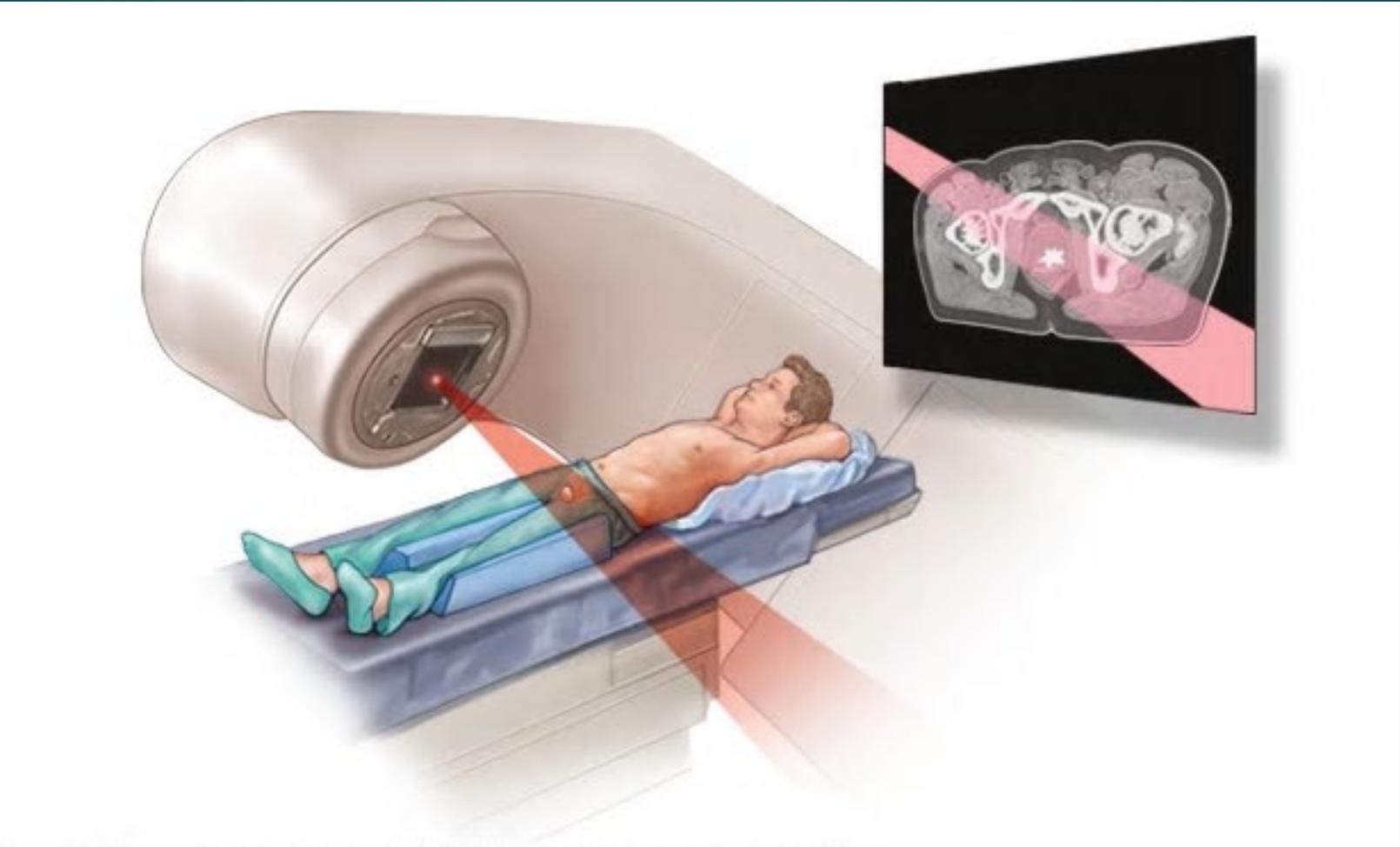
World Health Organization's International Agency for Research on Cancer which clearly classified EMFs (calling out cell phones in particular) as carcinogens

*“...radiofrequency electromagnetic fields (are) possibly carcinogenic to humans (Group 2B), based on an increased risk for glioma, a malignant type of brain cancer<sup>1</sup>, associated with **wireless phone use.**”*

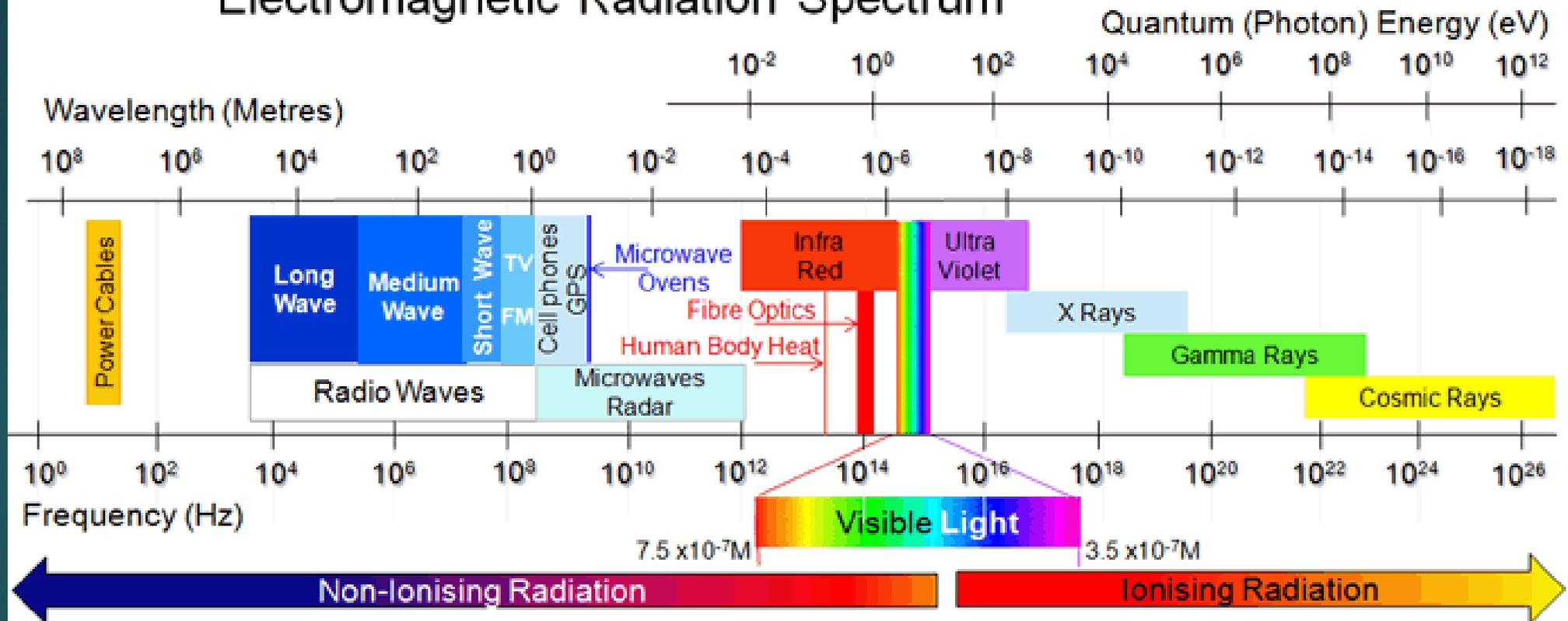
Note: Cigarette smoke is also classified as containing Group 2B carcinogens

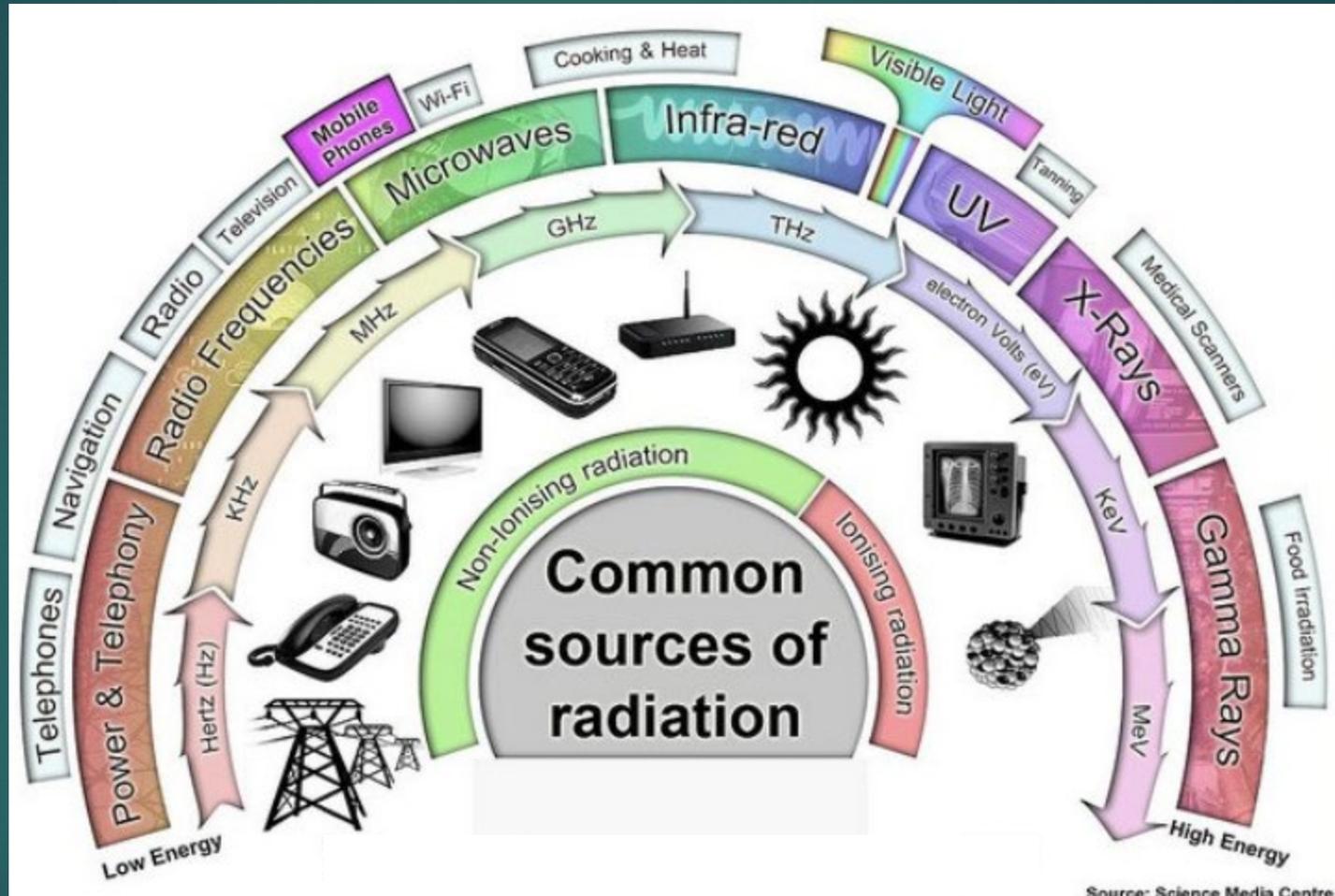
# Electromagnetic fields create effects



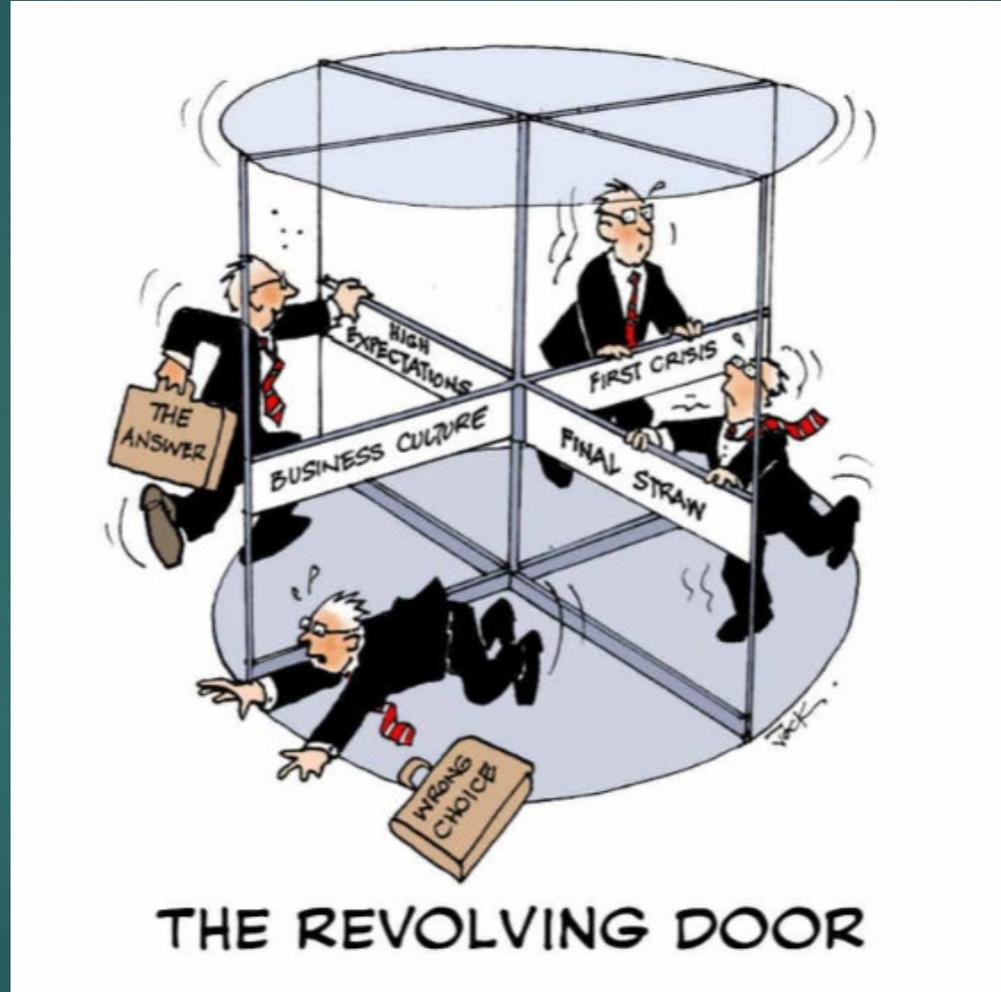


# Electromagnetic Radiation Spectrum





US Government  
Agency Officials



Private Corporate  
Management



## Featured Article



### Scientific American Warns: 5G is Unsafe

According to the telecom industry, 5G, the "5th Generation" wireless network, is required to give people the wireless freedom they crave and need. Described by HP as "blazingly fast," 5G, which is 70 times faster than its predecessor, 4G, "will replace cable internet for good," allowing you to download a two-hour high-definition movie in three seconds flat.

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**Cyber Monday Deals**

## 'No Reason to Believe 5G Is Safe,' Scientific American Says

In an October 17, 2019, article,<sup>13</sup> Scientific American warns "We have no reason to believe 5G is safe," and that "contrary to what some people say, there could be health risks." The article, written by Joel M. Moskowitz, Ph.D., director for the Center for Family and Community Health in the School of Public Health at the University of California, Berkeley, notes:<sup>14</sup>

*"The telecommunications industry and their experts have accused many scientists who have researched the effects of cell phone radiation of 'fear mongering' over the advent of wireless technology's 5G.*

*Since much of our research is publicly-funded, we believe it is our ethical responsibility to inform the public about what the peer-reviewed scientific literature tells us about the health risks from wireless radiation."*

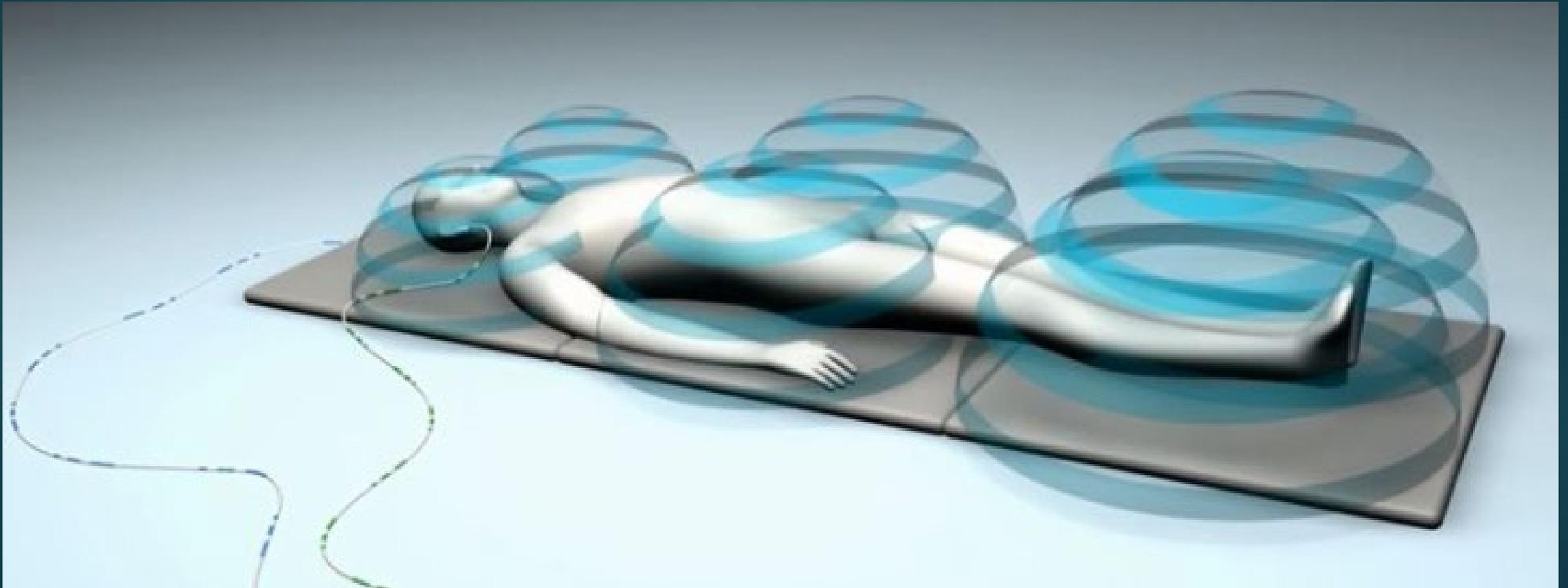
## No Safety Studies Have Been Done



Unlike the 4G technology currently in use, which relies on 90-foot cell towers with about a dozen antenna ports on each, the 5G system uses "small cell" facilities or bases, each with about 100 antenna ports.<sup>3</sup>

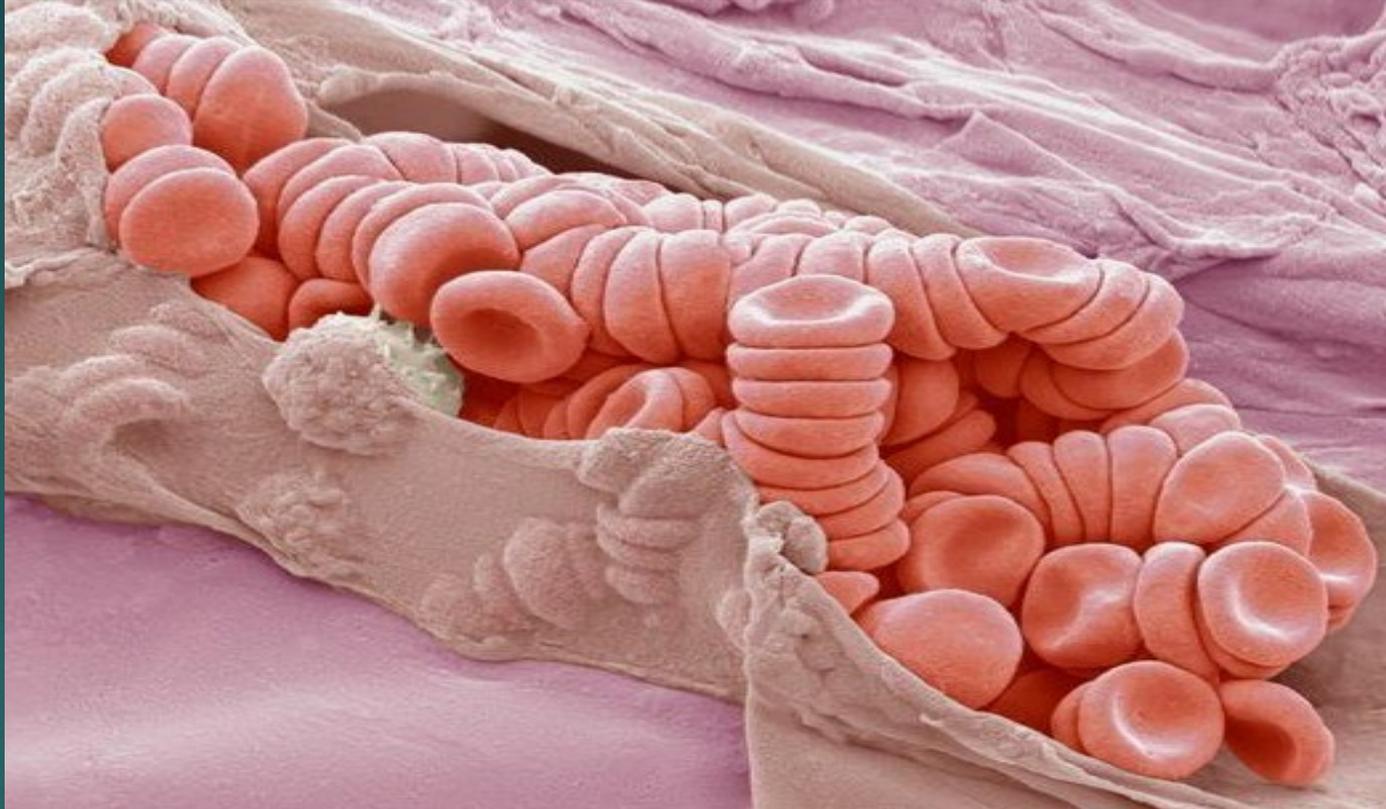
These cell bases will be mounted to already existing infrastructure such as utility poles. Ultimately, many if not most homeowners can expect to end up with a 5G cell base mounted right outside or very near their home.

# PEMF Devices (Pulsed Electromagnetic Field)





**“...Music for  
your cells”**

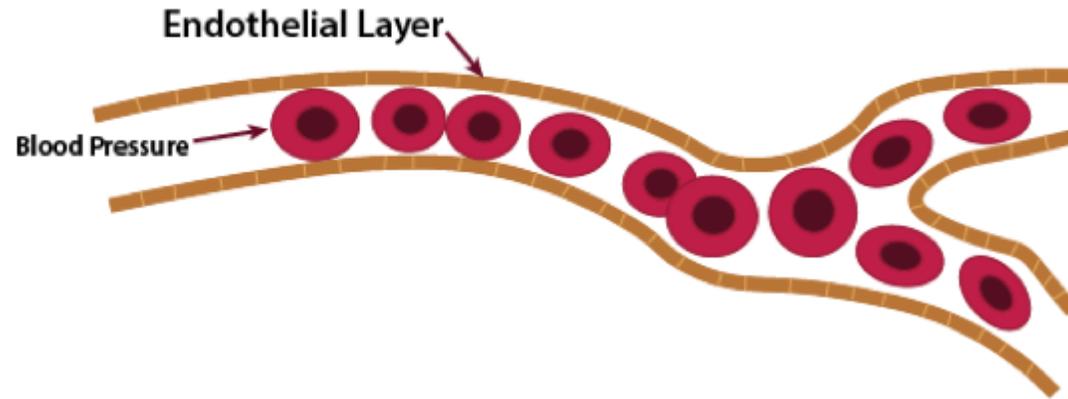


In addition to cancer, disruptive EMFs from cell phones and WI-FI has been shown to cause red blood cells to stack in the blood stream (Rouleaux Effect) preventing them from doing their job in distributing oxygen.

Research conducted in India with the PEMF devices shows that the beneficial PEMF signals it produces, un-clumps the cells returning them to full oxygenation function.

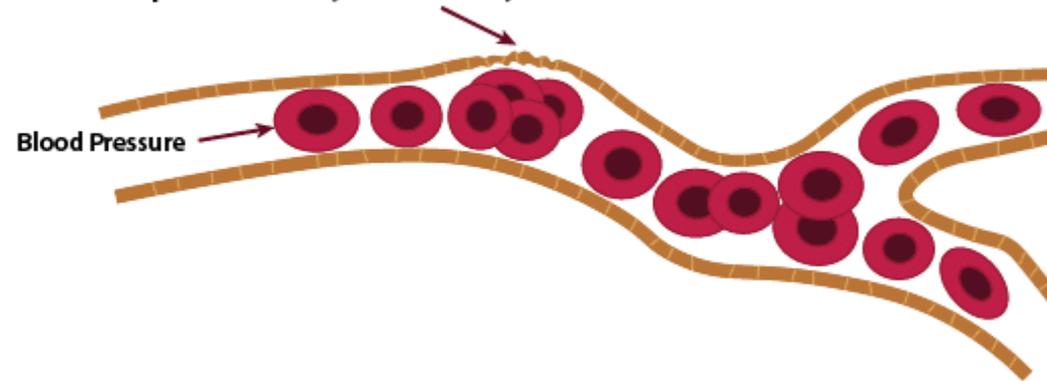
## Normal Blood Flow

Only one red blood cell at a time can flow through the smallest capillaries.



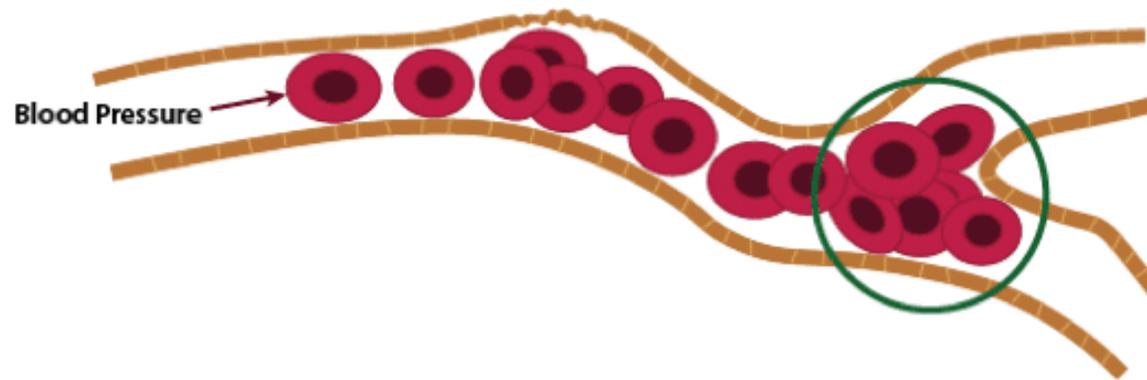
## Endothelial Damage

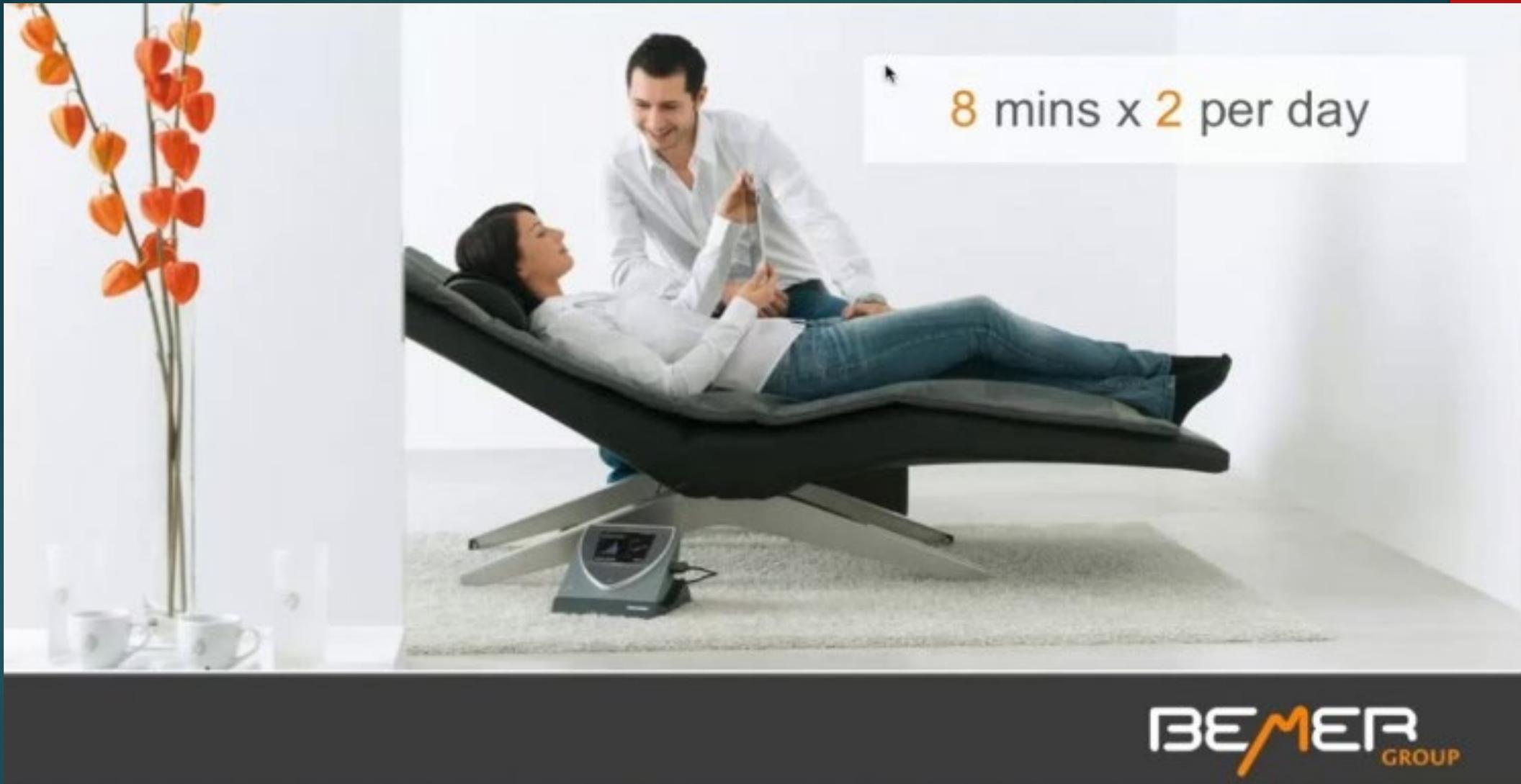
Small clumps of red blood cells being repeatedly forced through microcapillaries may eventually lead to endothelial trauma.



## Microcapillary Blockage

Large clumps of red blood cells may lead to complete capillary blockage, resulting in endothelial trauma and SSc symptoms such as pain and fatigue, often initial symptoms in diffuse systemic sclerosis.



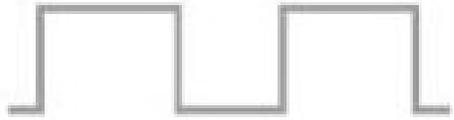


Bio Electric **M**agnetic **E**nergy **R**egulation

Sinusoidal



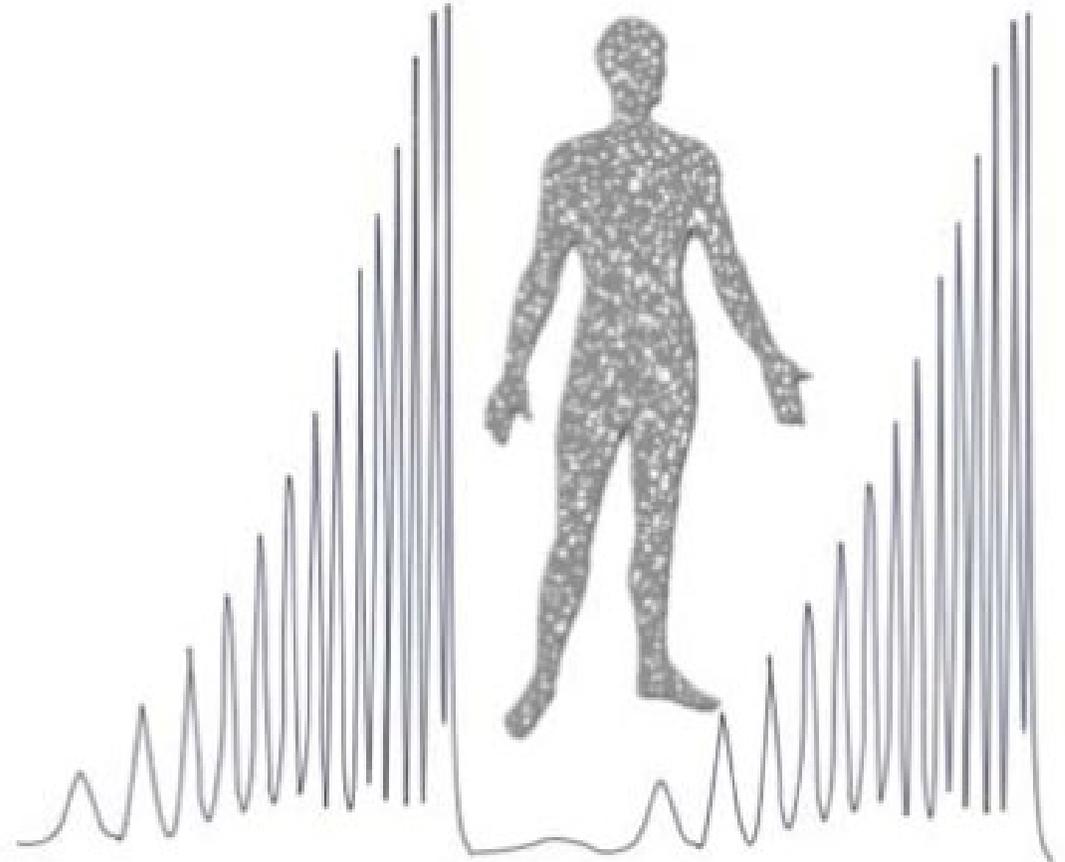
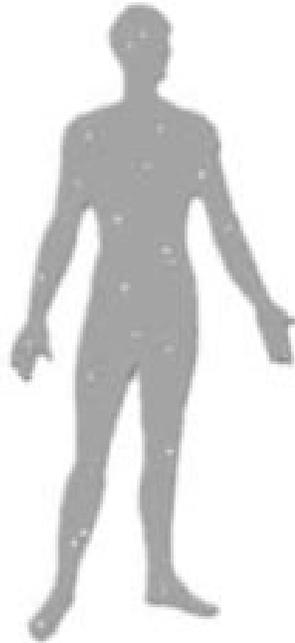
Square



Triangle



Sawtooth





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# Research!

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